

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 101-50.B.WO		FOR FURTHER ACTION		See Form PCT/IPEA/416																
International application No. PCT/IB2005/050705		International filing date (day/month/year) 26.02.2005		Priority date (day/month/year) 01.03.2004																
International Patent Classification (IPC) or national classification and IPC B29B11/10, B29C43/02, B29C45/16, B29C47/06																				
Applicant AISAPACK HOLDING S.A.																				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 10 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table border="0"><tr><td><input checked="" type="checkbox"/> Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/> Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/> Box No. III</td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td><input type="checkbox"/> Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/> Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/> Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input checked="" type="checkbox"/> Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input checked="" type="checkbox"/> Box No. VIII</td><td>Certain observations on the international application</td></tr></table>					<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input checked="" type="checkbox"/> Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/> Box No. VIII	Certain observations on the international application
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Date of submission of the demand		Date of completion of this report																		
Name and mailing address of the IPEA/EP		Authorized officer																		
Facsimile No.		Telephone No.																		

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Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-21 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-8 _____ received by this Authority on 06.06.2006 with letter
- nos.* _____ received by this Authority on of 31.05.2006
- ☒ the drawings:
- sheets 1/15-15/15 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-8</u>	YES
	Claims _____	NO
Inventive step (IS)	Claims <u>1-8</u>	YES
	Claims _____	NO
Industrial applicability (IA)	Claims <u>1-8</u>	YES
	Claims _____	NO

2. Citations and explanations (Rule 70.7)

1. In the present report, reference is made to the following documents:

D1: JP-A-02 098415;
D2: FR-A-2 520 288;
D3: EP-A-1 208 955;
D4: FR-A-2 180 831;
D5: JP-A-60 259425;
D6: US-A-2003/080461.

2. The following statements are made in the light of Box VIII.

2.1 Independent claim 1

Document D1 describes (the references between parentheses apply to said document):

- a multilayer charge with an axis of symmetry, for producing multilayer objects by means of compression moulding (*the abstract, figures 4*

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

and 5), which charge consists of a first synthetic resin and a thin functional layer that is trapped in said first resin, has less than 20% of the volume of said charge and forms the shell of a rotationally symmetrical body defined about said axis of symmetry (the abstract, figure 4).

It follows that the subject matter of independent claim 1 differs from this known document D1 in that the spacing between the functional layer and the axis of symmetry is variable.

The subject matter of claim 1 is, therefore, novel (PCT Article 33(2)).

The problem that the present invention is intended to solve can be considered to be that of enhancing the barrier properties of said multilayer object (the description, page 2, lines 30-35).

The solution proposed in claim 1 of the present application is neither known from, nor suggested in, the available prior art. The subject matter of claim 1 is considered to involve an inventive step (PCT Article 33(3)).

2.2 Independent claim 5

The same argument applies *mutatis mutandis* to the subject matter of corresponding claim 5, which is consequently novel and inventive (PCT Article

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33(2) and 33(3)).

2.3 Independent claim 6

Document D1 describes (the references between parentheses apply to said document):

- a method for producing an axisymmetrical multilayer charge, wherein a multilayer rod or tube made of molten resin is coextruded then periodically cut (*the abstract, figure 4*).

It follows that the subject matter of independent claim 6 differs from this known document D1 in that said method includes a step in which the spacing between the functional layer and the axis of symmetry of the charge is varied, and in that the flow of at least one layer is periodically varied, with flow periodicity being equal to cutting periodicity.

As a result, the subject matter of claim 6 is novel (PCT Article 33(2)).

The problem that the present invention is intended to solve can be considered to be that of enhancing the barrier properties of said multilayer object (*the description, page 2, lines 30-35*).

Even though coextrusion methods, in which the flow of at least one layer is periodically varied, are known (see D5, the abstract and the figures as well as D6, paragraph 17 and the figures), said

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documents do not solve the problem addressed by the present invention. As a result, the subject matter of claim 6 is considered to involve an inventive step (PCT Article 33(3)).

2.4 Independent claim 8

Document D2 describes (the references between parentheses apply to said document):

- a method for producing an axisymmetrical multilayer charge (page 3, lines 2-7), wherein a plurality of molten resins, including at least one functional resin, are injected into a die cavity (page 6, line 25 to page 7, line 19), the molten charge is then removed from the die cavity, and the cavity space is varied proportionally to the volume of resin injected (figures 2-11).

It follows that the subject matter of independent claim 8 differs from this known document D2 in that said method includes a step in which the spacing between the functional layer and the axis of symmetry of the charge is varied and in that the injection of the functional resin is preceded and followed by the injection of at least one resin.

As a result, the subject matter of claim 8 is novel (PCT Article 33(2)).

The problem that the present invention is intended

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to solve can be considered to be that of enhancing the barrier properties of said multilayer object (the description, page 2, lines 30-35).

The solution proposed in claim 8 of the present application is neither known from, nor suggested in, the available prior art. The subject matter of claim 8 is considered to involve an inventive step (PCT Article 33(3)).

3. Dependent claims 2-4 and 7

Claims 2-4 and 7 are dependent on claims 1 and 6 and, as such, therefore also fulfil the PCT requirements of novelty and inventive step.

4. The subject matter of claims 1 to 8 is industrially applicable (PCT Article 33(4)).

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. Contrary to the requirements of PCT Rule 5.1(a)(ii), the description does not indicate the relevant prior art disclosed in documents D2-D6, nor does it cite said documents.
2. Patent application number CH01619/04 should be replaced with a publication number.
3. The description should be brought into line with the amended claims, as required by PCT Rule 5.1(a)(iii).
4. Method claims 6 and 8 have not been properly drafted in two parts. Indeed, the preambles refer to product claim 1, which is novel (cf. PCT Rule 6.3(b)).

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

As far as PCT Article 6 is concerned, the following observations are made:

1. The vague expression "*a thin layer*" in claims 1 and 5 does not have a well-established, recognised meaning and casts doubt on the meaning of the technical feature to which it refers (cf. the PCT Guidelines, 5.34). As a result, the subject matter of said claims has not been defined clearly. This relative expression can, nevertheless, be kept in the claims but cannot be used to differentiate the subject matter from the prior art.
2. Product claim 5, which defines the products in terms of the production method therefor, is not acceptable unless the products *per se* fulfil the requirements of patentability (cf. the PCT Guidelines 5.26 and 5.27). It is important to note that some of the regional offices such as the European Patent Office do not accept product claims of this kind.
3. The method features in independent claim 6 do not necessarily lead to the product features disclosed in independent claim 1, particularly the feature differentiating claim 1 from document D1 (the spacing between the functional layer and the axis of symmetry is variable). It follows that an essential feature is missing from claim 6.

Box No. VIII Certain observations on the international application

4. Claim 6 does not fulfil the requirements set forth in PCT Article 6 in so far as the subject matter for which protection is sought has not been defined clearly. The claim attempts to define said subject matter in terms of the result to be achieved, i.e. *"... a step in which the spacing between the functional layer and the axis of symmetry of the charge is varied ..."*, yet this merely amounts to stating the basic problem that the invention is intended to solve without providing the technical features necessary for arriving at said result.